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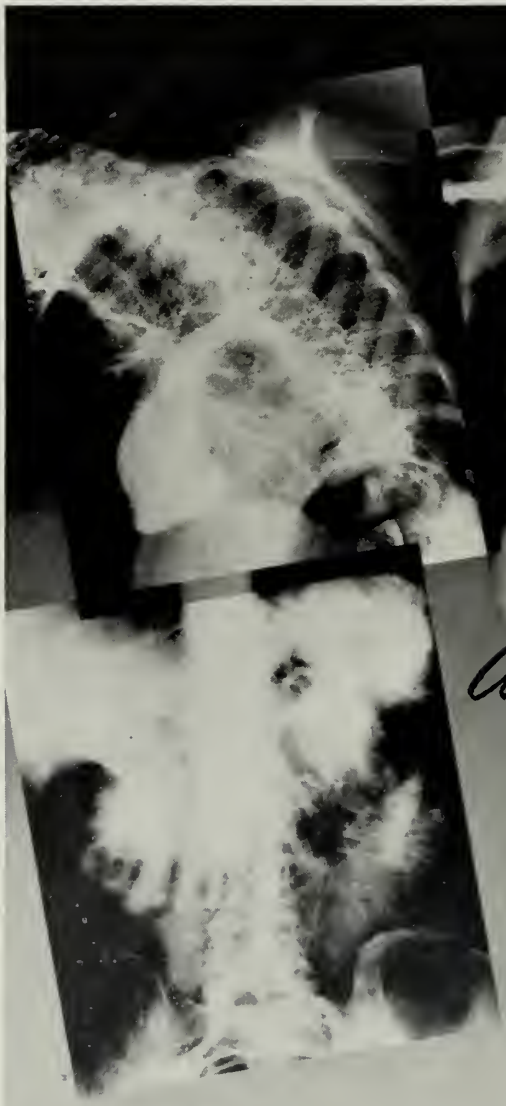

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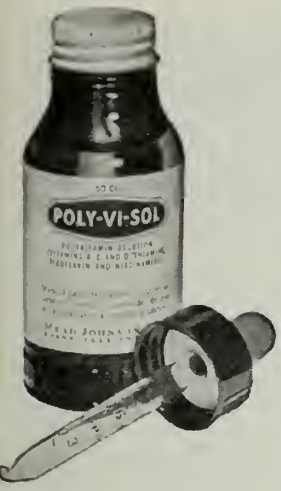

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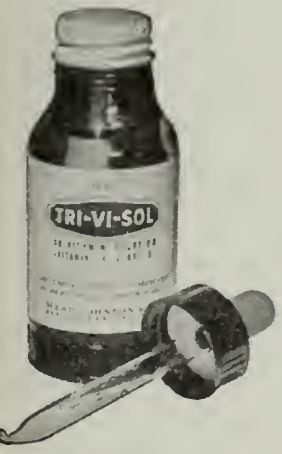

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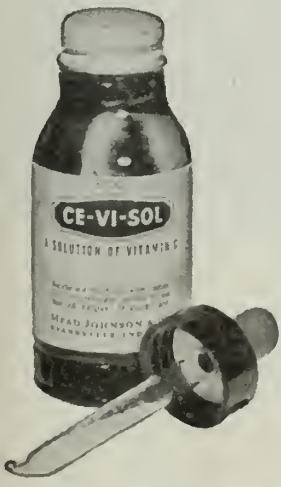

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GEORGE RICHARDS MINOT

(From a portrait by Charles Hopkinson which was presented to the Harvard Medical School by more than two hundred of Dr. Minot's friends and associates.)

George Richards Minot, 1885-1950

George Richards Minot died at his home in Brookline on February 25, 1950, at the age of 64, following twenty-eight years of diabetes but only one or two years of some incapacitation due to cerebral thrombosis.

In reviewing his life one is forcibly impressed by the various influences that prepared him well for his very considerable contributions to medicine. He was endowed with great curiosity and high intelligence; he was born into a distinguished medical family, was given the best educational advantages, and was exposed in his training years to some of the great medical teachers of the country. On the other hand, he had to adjust to frail health in boyhood and manhood. His handicaps possibly enabled him to exploit his ability for meticulous detachment. He seemed never so happy in his maturer years as when leaning over a microscope, or scrupulously exploring the medical history of a patient, occasions when his mind would reveal enormous imaginative capacity.

In 1934 he wrote in his address of acceptance of the Nobel Prize in Medicine*: "The idea that something in food might be of advantage to patients with pernicious anemia was in my mind in 1912, when I was a house officer at the Massachusetts General Hospital, as is noted in certain case records there. Ever since my student days, when I had the opportunity in my father's wards at the Massachusetts General Hospital, to distinguish from pernicious anemia two cases of chronic hemolytic jaundice, I have taken a deep interest in this disease." There probably comes to every man, who has been successful in advancing scientific knowledge, a certain crucial time when he realizes that it is within his powers to extract order out of disorderly natural phenomena and to find the truth. George Minot had been interested in biology before he went into medicine. Even before college he had published an original note on the larval stage of a certain butterfly. But his real impetus may well have come when he was able, as a mere medical student, to demonstrate to his elders the difference between certain cases of hemolytic jaundice and pernicious anemia.

George Minot graduated from Harvard College in 1908 and Harvard Medical School in 1912, both *cum laude*. But this was not accomplished without difficulties. He had some blind spots to certain kinds of pedagogy, perhaps partly due to teaching methods,—chemistry, economics and later German (foreign languages were a weak point). And there was the matter of ill health. On August 23, 1906 he petitioned Harvard College: "I should study to try to remove the condition in September (probably a condition in economics), but I have hayfever which makes it quite impossible for me to work then, and has prevented my doing so with success in previous years. I would state that I have never been strong, that year after year I have had to go South, or to California during the winter, and to a hay-fever-free place for the hay fever seasons." His father, James J. Minot, the eminent physician, wrote also to the Dean from his office at 168 Marlborough Street, August 27, 1906, " . . . I could detail the struggle we have had to get him strong to any length desired. His hay fever began on time this year."

George Minot was tall and thin, six feet one inch in height. His build was what the anthropologists would call *ectomorphic*, with rather narrow shoulders, a thin face and fine hair, a sensitive, expressive face with extraordinary blue eyes. He was certainly a frail-looking man, restless and nervous, and it is evident that he often overtaxed his strength. Nevertheless, he excelled in golf at one time. In 1921 the signs of diabetes mellitus appeared. He became even thinner under the strict dietary

*Shared equally with William P. Murphy and George H. Whipple.

regime of the time. He was one of the first of Dr. Elliott P. Joslin's patients to receive insulin treatment (January 1923) and was "Exhibit No. 1", as far as Dr. Joslin was concerned, to exemplify the possibility of a full, useful life for patients with this disease. He was never without his syringes, insulin and some source of glucose. All of the well-recognized complications of diabetes manifested themselves. His case would be an excellent illustration of the life-history of severe diabetes.

In 1912-1913 he served as house officer at the Massachusetts General Hospital. Among his fellow "pupils" on the East Medical Service were James H. Means, Edward P. Bagg, Jr., Francis M. Rackemann and John E. Talbot, and on the West Medical Service: Paul D. White, William D. Smith and Orville F. Rogers, Jr. Somewhat earlier came Walter W. Palmer and Reginald Fitz. David L. Edsall was at that time Chief of the East Medical Service and Jackson Professor of Clinical Medicine at Harvard. In later years George Minot often referred to Dr. Edsall's shrewd clinical sense and it is obvious that Edsall was one of the chief influences upon his medical career. Edsall at the time was developing the medical research facilities at the Massachusetts General Hospital, and he apparently had in mind younger men like Minot, Means and White to inhabit the laboratories which he was constructing in the Bulfinch Building. He was probably instrumental in urging Minot to the next step, the years 1913-1915 at the Johns Hopkins Hospital. There Minot spent a clinical year under William S. Thayer and a physiological year under William H. Howell. Upon returning to Boston in 1915 he began his active research career in the basement of the Bulfinch Building. Strong influences at the time were Lawrence J. Henderson, James Homer Wright, Channing Frothingham. Other names could be mentioned. as Roger I. Lee, Frederick T. Lord, Edwin A. Locke. (Note that every name associated with George Minot's clinical development represents the best in American medicine. One need not search further for an example of the fructifying influence of breadth of culture and knowledge in clinical teachers chosen by medical school and hospital.)

In 1915, at the age of 30, he was married to a very attractive young lady, Marian Linzee Weld. It is important to note that he could not have accomplished what he did without the consistent and effective help and the companionship of Mrs. Minot. The couple had three children, Marian, Elizabeth and Charles.

The years 1915-1923 at the Massachusetts General Hospital were busy ones in ward and laboratory. All blood cases were referred to him. Minot was the despair of some of the house officers for demanding daily blood counts on the anemia cases. To illustrate some of his many interests, the following areas of research are quoted from his application for the Dalton scholarship in 1920: "Certain phases of blood destruction; the relation of basal metabolism to the blood state of the patient in anaemia; its relation to prognosis and therapy in anaemia; the development of isohemolysis in blood; the significance of rouleaux formation; the fragility of red cells in relation to prognosis." This period also covered World War I, during which Minot worked on the toxicology of industrial poisons employed in the manufacture of explosives.

From 1923 to 1928 George Minot was Chief of the Medical Service at the Collis P. Huntington Memorial Hospital. He also was attached to the Peter Bent Brigham Hospital and was Associate in Medicine at the Medical School. Among those associated with him at the "Huntington" and the "Brigham" were William P. Murphy, Cyrus Sturgis, and Raphael Isaacs. He set up a private practice with Edwin A. Locke, and for many years had as assistants George P. Reynolds, Richard B. King, Richard P. Stetson, and John R. Graham. A faithful assistant, Miss Geneva A. Daland, now a leader in technical hematology, began work with Minot at the "Huntington" and continued at the Thorndike Memorial Laboratory. It was here that his work upon "The Treatment of

Pernicious Anemia by a Special Diet" was in fact completed, culminating in the reading of a paper before the Association of American Physicians and the classical though cautious article published in the J.A.M.A. (August 14, 1926, Vol. 87, pp. 470-476).

A much-deserved academic promotion came in 1928 with his appointment as Director of the Thorndike Memorial Laboratory at the Boston City Hospital and Professor of Medicine. The Laboratory had been built up to excellence by his predecessor, Dr. Francis Peabody, and Minot enlarged it and added to its reputation. Here he served until retirement in 1948.

Such is the outline of his career. He published over 100 papers on a wide variety of subjects, mostly anemia and nutrition but also concerned with various blood diseases, arthritis and the social aspects of medicine. He received many honors both here and abroad. Among the most valued in addition to the sharing of the Nobel Prize, were the Honorary Degree of Doctor of Science from Harvard in 1928, the Kober Medal of the Association of American Physicians in 1929 and Presidency of the Association, 1937-1938.

As Director of the Thorndike he was often a hard task-master. Much could be written of his years here which would elucidate his unusual character and his influence upon younger people. A pleasantry among his assistants was that "if you work for Minot you will soon wear glasses!" But he took personal interest in the welfare and advancement of those who worked for him, albeit excluding most ruthlessly those whom he thought dishonest or lazy. A resident would become accustomed to his almost daily notes written in a small, scarcely legible handwriting. A trip could be followed hour by hour from the postcards, as the following written to William B. Castle:

"Wed. Aug. 27, 1930

Dear Bill:

Yrs. rec'd before embarking. Cod fishes just landed and now running before E.S.E. breeze home. Fine day. Without time for why — have H. force to Nth degree bone marrow feeding on ———— (name of leukemia patient). Even dry if necessary the stuff at low heat. Keep him for weeks yet. . . . I've become convinced we (some one) can favorably affect leukemia. Have some one look up how much chaulmoogra oil one can be given."

An excellent teacher, he demanded good performance from students. The following note to a resident demanded action on a recalcitrant student:

"A student that I have never seen before appeared on my wards Friday. Of course, I have stupidly forgotten his name. . . . The point is that I thought he was very sloppy, casual and had taken distinctly an incomplete history. He has written it all over the page, that is to say, he wasted much space on the paper, in many places there were literally two words on a line, etc. . . . I am anxious that you get hold of this fellow and get him on the job to do things better. At least he should brace up as regards history-taking. Try and persuade him to be more careful on his physical examinations."

The following are notes to a resident:

"Have K. read this notice and return to basket my desk T. M. L. Tell K. (1) He should choose topic he desires to speak about May 2. (2) Have the abstract ready March 1 at latest for my perusal. (3) Inform me of topic by Feb. 1 (Miss C. note on my day sheet that K. does this by Feb. 1). K. — should study most effective and dramatic way to present the topic in 10 min. GRM."

"Dear ————:

May 14th I have asked a Miss H. to enter Ward Thorndike. It is of the utmost importance to see that a selected particular diet be given Miss H. as soon as she enters—be rather careful about it, ample fruit, meat, sparing in sugar, dextrinated carbohydrates, zwieback and the like, plenty of vegetables, soft and tender, perhaps 5 small rather than 3 larger meals a day. . . .

GRM"

Limited space prevents covering adequately all aspects of George Minot's medical thought. A quotation from the Alpha Omega Alpha lecture of 1935 indicates a matter of personal appraisal that must have been continuously on his mind:

"The power to see straight is a rare gift. To see no more and no less than is actually before one, to see with one's reason as well as with one's perceptions—that is to be an observer and to read the book of nature aright."

CLARK W. HEATH, '26

*A Note on Clinical Teaching**

George R. Minot

Whatever else accompanies clinical teaching, the students must be taught to work at the bedside seriously, carefully, and thoughtfully. Attendance at ward rounds should never be taken for without this formality one can easily learn to separate the good students from the ones who are casual and not really on the job. One way of discovering this is by asking questions; short questions, fired rapidly, and passing over those students who are sluggish or uninterested and do not reply quickly.

In addition to good ward rounds I think it well to assign each student during his medical clerkship a special topic on which to work, presenting his results in the form of a short written paper but delivered by him before a group of colleagues on his feet and without reference to his notes. His written and spoken performance should be criticized afterwards, sympathetically but firmly, since the art of writing and speaking is so important to a doctor.

I believe that the topics selected for such presentations should deal with principles rather than with diseases; the motor and secretory functions of the stomach and their alteration in disease rather than gastric disease, for example, or on jaundice rather than liver disease. Treatment also should be stressed and discussed broadly; not the use of digitalis but the treatment of the whole individual who needs it—his mode of life, his thoughts, his rest, recreation, diet, etc. This type of teaching is important because ways of approach to the patient and the value of common sense often are not adequately taught; too many recent graduates have little idea how to take care of patients except when they are bed patients in the wards of a hospital, and they flounder in handling people.

Perhaps I lay undue emphasis on this type of teaching. I am convinced, however, that in general, in present day teaching, we tend to neglect the patient's personality and the details of his life. I learned the importance of this from private practice. If students could be trained early to acquire this sort of knowledge, patients in general would receive better care. Medical students besides learning technics of various kinds must be trained in sympathy, in understanding the emotional states which so often perplex those who are physically handicapped and must learn to instill hopefulness and optimism in the minds of their patients as well as to write prescriptions.

On one other point I have strong conviction. All students are interested in what to do when they graduate: they should learn about different types of practice, and be told something of the value of medical societies and charities, of the work of boards of health, of the functions of a physician in the community. Basically I feel that they must be reminded over and over that in medicine, science is merely their tool of trade but practice is an art which they must master.

When I was President of the Boylston Medical Society I took for the text of my Presidential address bits from "The Art and Science of Medicine" on which Dr. Warren had chosen to speak to the Society just seventy-five years before I did.

In this address I gave samples of the relation of science to the art of medicine, stressed the value of broad reading and emphasized the importance of research as a means to developing new ways for the better care of those who are ill. These notes have been expanded so that for the last three years I have used them as the basis for my introductory lecture to the course in clinical medicine. Many students have come to me later to discuss the views which I have presented. I always say, "Work for the community and your patients and work and regard will come to you. Do not work for yourself and merely for your own interests."

*From a letter written from Pocasset, Maine on July 26th, 1923 to a friend in Boston.

*The University and the Biologic Laboratories of the State of Massachusetts A Short History**

EDWIN J. COHN, S.D. (Hon.), '45

The Biologic Laboratories of the Commonwealth of Massachusetts have sought for over fifty years to bring to every citizen of Massachusetts the benefits of succeeding scientific advances. To this end intimate scientific intercourse has been maintained with our universities and our schools of medicine and of public health. This close symbiotic relation has benefited our academic institutions in that they have remained aware of the changing needs and opportunities of contributing to the public health of the nation, as exemplified by that of the Commonwealth. At the same time those directing and carrying out the work of these laboratories have maintained very close contact and indeed have been an integral part of the world of ideas, research, and teaching, which is a university. As a result, the history of the Biologic Laboratories of this Commonwealth demonstrates the way in which research—whether carried out in these or other laboratories—leads to new prophylactic and therapeutic agents, and how continuous concern with the production of these agents inevitably leads to new investigations and new products of benefit to the community.

The product that the Commonwealth undertook to develop in 1894 was diphtheria antitoxin. The bacteriologist employed in 1895 by the State Board of Health to direct this work was the great American scientist, Theobald Smith. The laboratory was moved from the State House to Forest Hills at this time and here, without interruption, one biologic product after another has been developed and produced under the guidance of a series of directors of great distinction and wisdom. Theobald Smith was succeeded in 1914 by Milton J. Rosenau, in 1920 by Benjamin White, and in 1933 by Elliott Robinson.

As a member of the Faculty of the Harvard Medical School I must be permitted to dwell for a moment on the pride with which we remember the association with our Faculty of each of these great directors of the Division of Biologic Laboratories. For, each of these men was a member of our Faculty, and if the laboratories of the Harvard Medical School have contributed to the development of biologics in these state laboratories, so also have the members of these laboratories contributed to the widening horizon with which the faculty of medicine has viewed the problems of the public health, leading in our time to the establishment of a School of Public Health.

How completely this was the intent of those who founded the State Board of Health is revealed by the report of a Commission, composed of Lemuel Shattuck, Nathaniel P. Banks, Jr., and Jehiel Abbot, to the Massachusetts Legislature in 1850.

"The cause of Public Health needs a . . . central agency, to give to the whole sanitary movement a uniform, wise, efficient, economical and useful direction. . . The advantages which would result to the whole State, and to every part of

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*Address delivered at the dedication of the new Blood Processing Laboratory, Division of Biologic Laboratories, Massachusetts Department of Public Health, March 26, 1947. This development was made possible by a grant of the Godfrey M. Hyams Trust to Harvard University for construction of this Laboratory for the use of the Commonwealth.

I am indebted to Mrs. James H. Jackson for undertaking a survey of the documents relevant to this interesting history; to the Dean's office of the Harvard Medical School for making available the early records of the Faculty of Medicine, and to the Department of Public Health of the Commonwealth of Massachusetts for making their records available.

it,—to each and all of the inhabitants,—from the establishment of such a central General Board of Health, composed of the best scientific counsel and the best practical experience which the State can afford, having constant access to the most enlightened intellects, and to a knowledge of the labors of the best practical men in the world, and assisted by at least one mind wholly devoted to the object in view, are too great to be fully seen at once, and can scarcely be overstated or overestimated."[1]

A State Board of Health was appointed by the Governor in 1869, consisting of seven men with Henry I. Bowditch, James Jackson Professor of Clinical Medicine at the Harvard Medical School, as chairman. Addressing the first meeting of the Board, he stated:

"I confess to you that I know of no higher office in the State than that which we now hold, viz., that of inaugurating the idea of 'State medicine' in Massachusetts. Upon our high or low appreciation of the position and of the duties resulting from that position, and upon our wise or foolish performance of these duties, depends the success of the object aimed at in the establishment of a State board of health. . . . Our work is for the far future as well as for the present, . . ."[1]

Bowditch relinquished the Jackson Professorship and directed the activities of the State Board of Health until 1878 when he resigned and Charles S. Folsom, Lecturer on Hygiene and Mental Diseases at the Harvard Medical School, became Health Officer. Henry P. Walcott, who succeeded him in 1880, became Chairman of the Committee on Health in 1882 and of the reorganized State Board of Health in 1886. During Walcott's long service to the Commonwealth and to the University, the foundations for our present institutions were laid.

After receiving his medical degree, Walcott had studied in Berlin, Vienna and Paris. Returning to Cambridge, where he practised medicine, he became a member of the Cambridge Board of Health and served as City Physician from 1878 to 1891. Walcott not only served the city and the Commonwealth, but also was elected to the Board of Overseers of Harvard University in 1887, and to its Corporation in 1890. He was Chairman of the Board of Trustees of the Massachusetts General Hospital and President of the XV International Congress of Hygiene in 1912.

At an earlier meeting of the International Congress of Hygiene, at Budapest in 1894, Emile Roux, a pupil of Pasteur, had reported on the preventive and therapeutic value of antitoxin. Walcott at once realized the importance of this new development and conceived the idea of establishing a laboratory in Massachusetts, as was being done in New York City, where antitoxin could be manufactured under state supervision and distributed free to all who needed it. A laboratory for the production of diphtheria antitoxin was set up at the State House in November, 1894, under the supervision of Joseph L. Goodale, a young Harvard Medical School graduate, just returned from a year of study in Europe during which he had visited some of the first laboratories to produce antitoxin. The horses needed for the production of the antitoxin were stabled on the grounds of the Bussey Institute through the cooperation of Harvard University and "the first quantity of antitoxin of a sufficient strength for use in the preventive treatment of diphtheria was offered for distribution in March, 1895."[2]

Thus it was that the Massachusetts Antitoxin and Vaccine Laboratory, which subsequently became the Division of Biologic Laboratories, came into existence and was located on the grounds of the Bussey Institute at Forest Hills where it has grown and where recently we dedicated a new building, incorporating new installations for the production of biologics.

Growth was so rapid in the first years that more space and a trained bacteriologist were essential. Theobald Smith was Chief of the Division of Pathology of the Bureau

[1] The State Board of Health of Massachusetts. A Brief History of Its Organization and its Work, 1896-1912. Wright and Potter Printing Co., 1912, pp. 9 and 10.

[2] Twenty-seventh Annual Report of the State Board of Health, 1896, p. 689.

of Animal Industry at Washington, D. C. Walcott, as Chairman of the State Board of Health, chose Theobald Smith to direct the production of antitoxins for the Commonwealth. As a member of the Harvard Corporation, Walcott knew of an endowment just offered to Harvard by George F. Fabyan of Boston.

"Boston, April fifteenth, 1896

"To the President and Fellows of Harvard College:

Gentlemen:—It is my wish to testify to my deep interest in the advancement of medical science and the higher medical education, an interest originating in the fact that my father, George Fabyan, M.D., of Boston, was a physician. I therefore offer to the President and Fellows of Harvard College . . . a fund for the endowment of a professorship of Comparative Pathology in the Medical Department of Harvard University. . .

"It is furthermore my wish that the income of this fund shall be applied forever, first, to the payment of the salary of the Fabyan Professor of Comparative Pathology, who shall also be a member of the Medical Faculty and appointed to office in the same manner as are other professors in that body, and who shall devote his time to the duties of the professorship, and shall not engage in private practice, without the recommendation of the Medical Faculty and the consent of the President and Fellows; and second, if any income remain after the payment of his salary, to the procuring of materials or apparatus needed by him in giving his instructions or conducting his researches.

"The subjects to which I desire this endowment to be devoted are the comparative study of human and animal diseases and the prevention and cure of diseases in both men and animals."[3]

On May 11, 1896, the Harvard Corporation voted to establish this professorship and to appoint Theobald Smith as the first incumbent.

"Owing to the lack of space in the school building, facilities were provided at the Bussey Institution of Harvard College near the Forest Hills station. Three rooms of medium size were fitted up, together wtih a small animal house—a transformed unused greenhouse attached to the building of the institution. . . During this period the occupant of the chair has also been engaged, with the consent of the Corporation, in developing and directing the laboratory of the State Board of Health for the production and free distribution of antitoxines and vaccine lymph.

"Though the association of the Professor of Comparative Pathology with this work may appear, at first thought, a slight departure from the aims and purposes of the foundation, it has proved a great benefit in giving the needed stimulus for research into problems of a practical nature, a stimulus likely to be wanting when contact with actual disease is not provided for."[4]

"The laboratory connected with this department was practically coextensive with that of the serum laboratory, and permitted that cooperation which enabled Dr. Smith not only to direct the routine work, but also to engage in investigations directed towards the improvement of the serum and the greater accuracy of standardization."[5]

For the next nine years research and preparation of antitoxins were carried on at the Bussey Institute, under Theobald Smith's careful supervision. The annual production figure rose rapidly until, after the diphtheria epidemic of 1900-01, the demand for antitoxin increased to such an extent that, coupled with the decision of the State Board of Health to begin preparing vaccine lymph as well, the quarters at the Institute became inadequate for the work. The new project would insure vaccines of known and approved quality, such as had not been possible formerly, when they had been procured from a number of different laboratories, most of which were outside the state. In 1903 a bill was passed by the Legislature, authorizing the State Board to produce and distribute antitoxin and vaccine lymph and the Corporation of Harvard University offered to build a brick laboratory on the grounds of the Bussey Institute and lease it to the state.

This laboratory in turn became inadequate and a new building was erected at Forest Hills by Harvard University in 1926, largely through the efforts and energy of Dr. David Edsall, then Dean of the Harvard Medical School as well as of the newly created School of Public Health. In describing the opportunities, not only for

[3] Annual report of the President and Treasurer of Harvard College for 1895-96, p. 270.

[4] The Harvard Medical School, 1782-1906. Privately published, 1906, p. 158.

[5] The State Board of Health of Massachusetts, op. cit., p. 39.

producing antitoxins, but also for training those in the new School of Public Health, Dr. Edsall wrote to Dr. F. F. Russell of the International Health Board of The Rockefeller Foundation which contributed funds for the program:

"(The Director of the Laboratory) is . . . in . . . the same position as the Commissioner of Health and the Deputy Commissioner, all of whom take important parts in the activities of this School. These are all State appointees in so far as their State positions are concerned, but so far as their teaching and research in the University is concerned it is dependent on the fact that they are also appointees of the University. In this way . . . the Director has charge of the teaching of these students as part of his University duties."[6]

In fact, the training of men versed in the techniques of biological preparations has been a notable contribution of these laboratories and those trained by Benjamin White, the first full-time director, and Elliott Robinson, now hold many important government, industrial and university posts and are thus widely disseminating the traditions of the Massachusetts Laboratories.

During this period also, collaboration with colleagues at the Harvard Medical School resulted in a series of new biologic products. In 1927 the work of Fothergill and Ward of the Department of Bacteriology led to a serum for the treatment of influenza bacillus meningitis and in 1932 that of Zinsser and Castenada to an antityphus serum. The work of A. M. Pappenheimer, Jr. at the State Laboratory, based on a suggestion of Mueller's, resulted in more potent diphtheria toxins, and Mueller's work since 1941 in a refined tetanus toxoid. In each case research led to development and production at the State Laboratories.

Until recent times the work of biologic laboratories had been concerned, from one point of view or another, with the refinement of animal products. Not only were greater concentrations achieved, but the antigenicity of the animal products was diminished by advances of this period. However, a source of antibodies, derived from human tissues, and free from the antigenic reactions of a foreign source, was employed when McKhann in 1934, then Assistant Professor of Pediatrics and Communicable Diseases at the Harvard Medical School, developed a placental extract for measles antibodies. These antibodies, produced and distributed by the state from 1934 to 1944, were derived from placental blood and thus represent the first product derived from human blood distributed by these laboratories. . . .

During the summer of 1940, when the fractionation of human plasma was just beginning, the Director of the Massachusetts State Biologic Laboratories, Dr. Elliott Robinson, foresaw the value of the antibody fractions for measles prophylaxis. Beginning in 1942, under the Acting Director, Dr. Geoffrey Edsall, these laboratories distributed more than ten thousand grams of the gamma-globulin antibodies, at first for clinical appraisal. The gamma-globulin antibodies were recommended to the armed forces in March, 1943, and on April 6, I wrote to the newly appointed Chairman of the Medical Advisory Council of the American Red Cross:

"From the point of view of the Red Cross, the by-products, such as the red cells which are separated from the plasma as well as the fibrinogen (in Fraction I) and thrombin (in Fraction III-2), the isohemagglutinins (in Fraction III-1) and the measles protective antibodies (in Fraction II), clearly cannot become a source of profit to commercial houses. According to the contract between the Navy and the commercial houses preparing normal human serum albumin, the by-products are the property of the Government and are being retained in the cold under conditions believed to be the best that can be specified at this time. These conditions will permit the preservation for protracted periods of certain, but not all, of the properties of these valuable by-products. All of those mentioned above could be brought into more stable states, including the dry state, although this would involve additional processing of all subfractions.

"The problem that confronts us can be most clearly stated at this time in connection with

[6] Correspondence of Dean D. L. Edsall concerning the new building at Bussey Institute, 1925. Files of Dean's office, Harvard Medical School. Letter dated November 17, 1925.

Fraction II of our plasma fractionation process, containing the human antibodies which appear on the basis of reports, thus far available to be of value in the protection against and treatment of measles. Assuming that subsequent tests bear out the very encouraging results that have thus far been obtained and assuming that all of the plasma being fractionated to yield albumin under this year's Navy contracts could be processed to yield this concentrate of human measles antibodies, something over two million doses could be made available. It is very probable that this is too low an estimate since similar doses would suffice to modify rather than prevent the disease and since no allowance is made for any new contracts that may be made by the armed forces for the preparation of normal human serum albumin. This amount of protective antibody is presumably greatly in excess of any needs that the armed forces may have for this by-product of the preparation of normal human serum albumin. . . .

"The necessity emerges of developing a policy so that the maximum amount of these valuable human proteins may be so used as to prove of the greatest military value, and where the amounts available are in excess of military use, of the greatest social value. The human antibodies that can be made available and employed in the control of measles and, later perhaps, of the other infectious diseases, should clearly not be permitted to deteriorate. The Red Cross, which has collected this blood for the armed forces might well, it seems to me, be put in the position of making a public restitution of those of the by-products not needed by the armed forces—that is, insofar as so doing would not interfere with the war efforts."[7]

The war effort is over. The policy of the American Red Cross in returning to the public the surplus, stable blood products, derived from the blood which it so generously contributed, is but the beginning of a civilian blood program.

Much remains to be discovered regarding the optimal uses of blood and blood derivatives. The chemist must make available as many as possible of the various lipoproteins, glycoproteins, mucoproteins, iodoproteins, metal-combining proteins, antibodies, enzymes, and hormones. The physiologist, immunologist, and pharmacologist must study each concentrate to determine its natural functions, and the clinician must investigate its value in therapy.

During the war the armed forces could count on the generosity and loyalty of the American people in giving its blood, as well as on the collaboration of all of these investigators, with diverse training, who have contributed to our present knowledge of blood and blood derivatives. This Commonwealth, and the American Red Cross, can also count on the continuing collaboration of its citizens in carrying into the peace this social and scientific experiment in the interest of the public health.

In accepting the cordial invitation of the Commissioner of Public Health to deliver this dedication address, at the formal opening of the new Blood Processing Laboratory, made possible by the generosity of the Godfrey M. Hyams Trust, I wrote, in part: . . . . "The development of the first really complete blood and blood derivative program, as a public health venture, represents a great step in advance, and it is a source of pride that it should be made in this Commonwealth. . . . . I shall attempt . . . . to develop the interesting history of the symbiotic relation that has always obtained, since the time of Theobald Smith, between the Massachusetts Antitoxin and Vaccine Laboratory and the Harvard Medical School,"[8] and, of course, since its foundation, with the Harvard School of Public Health. The pattern that has now persisted and proven effective for over fifty years would appear to be of continuing value to the Commonwealth and to the University and might well serve as a pilot experiment in integrating the advantages of independent foundations, such as Harvard University, dedicated to the freedom of teaching and research, and government institutions, such as the public health laboratories of our states and nation, which are charged with responsibility for the welfare of our society.

[7] Letter to Dr. Lewis H. Weed, April 6, 1943.

[8] From a letter to Dr. Vlado A. Getting, February 21, 1947.

Rabelais and His Circle•

John F. Fulton, '27

With his usual penetrating genius, François Rabelais once commented that 'there be more old drunkards than old physicians', but of course he didn't know the Aesculapian Club. As you are aware, the reputation for longevity among members of this Club is quite phenomenal, and it has suddenly occurred to me that Rabelais' cogent comment may perhaps throw some light on the reason for your long-lived tendencies. Although he had not had the shattering experience of encountering the Aesculapian Club collectively, Rabelais knew a great deal about medicine, and if he, rather than Aesculapius, should have paid a visit to the Harvard Medical School, he probably would have asked questions as searching as those which one of my predecessors in this honorable oratorical responsibility put into the mouth of Aesculapius —questions that would have revealed that he was humanist who believed that physicians should be educated men and not merely technicians.

Between François Rabelais and Frederick Irving there would be immediate understanding, and after his visit to Boston the distinguished French humanist would no doubt have left humming the "Ballad of Chambers Street"—perhaps adding a few verses of his own. This is not to imply, however, that all was fun and frolic between Rabelais and his circle, for in his good-natured way Rabelais was desperately in earnest and through his bawdy wit did as much as any Frenchman of the sixteenth century to stabilize the French language and to make it, as a vernacular tongue, a vehicle not only of modern literary expression, but of the science of medicine itself.

The facts of Rabelais' colorful life are not well known, and there are certain periods of his existence, supposedly when he was avoiding the Inquisitors, which are completely lost to his historians. Although the date of his birth is still in question, the year 1494 is the one generally accepted; his birthplace La Devinière in the Touraine, a league away from the ancient town of Chinon. His father, a landowning lawyer, derived a comfortable income from his rich vineyards, famous for their white wine. Rabelais loved this countryside of his youth and he returned to it when gathering material for his *Gargantua.* Many of his scenes and much of the lusty naturalness of his language reflected this locale.

At an early age François Rabelais was sent to a Franciscan monastery for his education and here he had his first taste of the culture of the Renaissance through the Greek texts of a fellow monk. But the study of Greek was discouraged by the inquisitorial element at the Sorbonne, and the young scholars were initiated into the fear, common among all who sought the new learning, of the stake and the torture-chamber. Their Greek books were taken away from them and returned only through the intervention of the great French scholar and humanist, Guillaume Budé. Rabelais thus learned early the value of powerful sponsors, and throughout his life, when he more than once tried the patience of the Inquisitors, they protected him and saved him from the faggots.

Through the help of one of these patrons, Geoffroy d'Estessac, Bishop of Maillezais and Abbot of the Benedictine monastery of Saint Pierre, Rabelais managed to obtain the permission of Pope Clement VII to change his Franciscan habit for that of a Benedectine, and as an aide to the enlightened Bishop, he was able to pursue his studies with great freedom. During this period he was introduced to a circle of humanistic students, among them the poet Jean Bouchet. As a poet, Bouchet was undistinguished, but he has been described as a "real philosopher and a profound artist

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•Annual oration. The Aesculapian Club, Boston, 14 January, 1950.

in the art of life." Through his influence, Rabelais became interested in French literature and almost immediately he began writing in French. He also tried writing poetry, but it was definitely not his medium, as is evident from the following jingle which issued from the lips of Friar John in the Fifth Book of his great masterpiece, *Pantagruel.*

"O God, thou holy sire divine,
Who out of water made the wine,
Make of my rump a lantern bright
To guide my neighbour thro' the night."

Another example of this barbaric doggerel can be found in Gargantua's inscription on the tombstone of Badebec, his wife, who died giving birth to Pantagruel:

"She died of child, and that's no riddle
The noble Badebec, for this
Is the truth; her face was like a fiddle,
A Spanish body, her belly Swiss.
Then pray to God to give her bliss,
And pardon her—she sinned, no doubt,
Here lies one not too remiss
Who died the day that she passed out."

From 1527 to 1530 Rabelais disappeared from sight. It is assumed from his numerous references throughout *Gargantua* and *Pantagruel* that he spent these years in a student *Wanderjahre,* visiting Bordeaux, Toulouse, Orleans, and Paris. He seems especially familiar with university life at Paris. In September 1530, aged thirty-six, Rabelais signed the register of the Medical Faculty of Montpellier, having decided to become a physician. But shortly, as is often the case with medical students, his funds began to run out and we next find him in Lyon where a well-read medical student with a knowledge of Greek was welcomed as a proofreader among the scholar-printers who had made Lyon the center of the new printing industry and a center also for humanistic enterprise. In this atmosphere Rabelais was inspired to bring out an edition of Hippocrates' *Aphorisms* and Galen's *Ars medicina* bound together in a single volume. Commenced in the spring of 1532, this remarkable little book was off the press in time for the Lyon book fair in August. The rapidity with which he wrote in those days before secretaries and dictaphones was amazing, and the scholarship and knowledge of the ancient tongues evidenced in his erudite annotations both in Latin and Greek have been universally judged by classical scholars to be above reproach. What medical student in his thirties would be able to discharge such a feat of intellect at the present time?

This little duodecimo, published from the celebrated press of Gryphius, is one of the rarities of medical literature, and only four or five copies have appeared in the catalogues in the last twenty-five years. Dr. Cushing bought one in 1922 for £25 and, as far as I am aware, the last one offered for public sale was the Halle copy in 1931 which was priced at $750. If a copy should turn up now, it would probably fetch several thousand dollars.

The city of Lyon was famous at this time not only for its printing presses and humanist-printers, but for its book fairs, held four times a year to bring out the new books. At the autumn fair in 1532, held in August, there appeared an anonymous volume which became the season's best-seller. It bore the title, *The great and inestimable chronicles of the great and enormous giant Gargantua,* etc., and Rabelais later wrote: "The printers have sold more copies of that work in two months than they have Bibles in nine years." Rabelais himself has been thought to be the author, but scholars are now generally agreed that he was not. The work undoubtedly inspired him, however, to write something of his own according to a similar pattern.

He must have set about the task with considerable vigor, for by the winter fair, which began on November 3d of that year, he was able to issue *Pantagruel, king of the dipsodes,* his first work of a literary character. The oldest edition known bears the imprint of Claude Nourry who was located "opposite Our Lady of Comfort." John Cowper Powys says his *Pantagruel* was written "as if Balzac and Sir Walter Scott were competing with him in speed while

Shakespeare and Cervantes were competing with him in the quality and substance of what he wrote."

The summer of 1532 had been the driest France had known for centuries, and the drought had made a profound impression on Rabelais. The talk on every side was of the heat and the lack of rain, and Rabelais hit upon Pantagruel, the "little devil" of thirst in late-medieval mystery plays, as the central figure around which his fertile imagination wove tales of adventure. Thirst for the juice of the grape became the symbol of man's thirst for wisdom.

Although some of his subsequent books were more polished, the second part of the *Pantagruel* has been unsurpassed. Lefranc has called Gargantua's letter to Pantagruel, lately arrived in Paris, "the most ardent hymn ever composed to the glory of the Renaissance." J. Plattard, another Rabelais scholar, says that the program of encyclopedic instruction which Rabelais outlined in this letter conformed "to the intellectual idea of the humanists of the time." Gargantua urged Pantagruel to obtain all the profit he could from his studies and from virtue. He told him that it was his desire that he learn all languages—first Greek, secondly, Latin, and then Hebrew, Chaldaic, and Arabic. He urged him to continue his interest in the liberal arts, geometry, arithmetic, and music; to endeavor to master the laws of astronomy; to learn by heart the best texts of civil law and compare them with philosophy.

> As for a knowledge of the facts of nature [Gargantua continued], I would have you apply yourself to this study with such curiosity that there should be no sea, river, or stream of which you do not know the fish; you should likewise be familiar with all the birds of the air, all the trees, shrubs, and thickets of the forest, all the grasses of the earth, all the metals hidden in the bellies of the abysses, and the precious stones of all the East and South: let nothing be unknown to you.
>
> Then, very carefully, go back to the books of the Greek, Arabic, and Latin physicians, not disdaining the Talmudists and the Cabalists, and by means of frequent dissections, see to it that you acquire a perfect knowledge of that other world which is man . . .

Gargantua concluded that "since science without conscience is but the ruin of the soul, it behooves you to serve, love, and fear God and to let all your thoughts and hopes rest in Him." Rabelais reported that "when he had received and read this letter, Pantagruel took fresh courage, and was inflamed to profit more than ever from his studies; to such a degree that, seeing him so study and profit, you would have said that his mind among his books was like a fire among brushwood, so violent was he and so indefatigable."

The popularity of *Pantagruel* carried it to Paris and in 1533, just as Rabelais was being introduced to the Court (for Francis I had arrived in Lyon for the marriage of his son to Catherine de Medici), the Faculty of Theology of the College of the Sorbonne condemned his book as obscene. Almost simultaneously Rabelais met in Lyon the two men who were to become his most loyal and influential patrons—the great cardinal, Jean du Bellay, and his brother Guillaume, Seigneur de Langey. These two enlightened statesmen henceforth sponsored and protected him, being fond of his bold and sprightly satire and also valuing his services as a physician.

Two years after *Pantagruel* saw the light of day, Rabelais brought forth his *Gargantua* which is now always placed before the *Pantagruel* and called Book First, since the events precede in time those of *Pantagruel.*

This, like his first volume, was not signed, for not until his Third Book was published in 1546 under a privilege from Francis I did he sign his name on the title-page. In the meantime, he had revised the first two, had replaced "Sorbonnists" with "sophists" and had softened many of the passages which gave offense to the Sorbonne. However, his good friend the talented printer Étienne Dolet, nearly brought them both to the stake by reprinting in 1542 a pirated and unexpurgated edition of the original text which purported to have been "beaucoup augmentée" by Rabelais himself. Dolet, already in prison for some offense, has been excused for this flagrant betrayal of friendship by those who say that the deed was done at his press

unbeknownst to him, but it was the end of his association with Rabelais.

Preceding the author's Prologue *Gargantua* are a few lines of verse addressed

To the Readers

My friends, who are about to read this book,
Please rid yourselves of every predilection;
You'll find no scandal, if you do not look,
For it contains no evil or infection.
True, you'll discover, upon close inspection,
It teaches little, except how to laugh:
The best of arguments; the rest is chaff,
Viewing the grief that threatens your brief span:
For smiles, not tears, make the better autograph,
Because to laugh is natural to man.

Then comes the Prologue which commences: "Most illustrious Drinkers and you, most precious Syphilitics, for it is to you, not to others, that my writings are dedicated." In it he warns the reader that, like a dog after the marrow in a bone, he must "be wise in sniffing, smelling, and estimating these fine and meaty books." Couched in such symbols is the fact that there are here revealed "horrific mysteries in what concerns our religion, as well as the state and our political and economic life." He concludes with:

> However, you are to interpret all I do and say in the very best part, holding in reverence the cheese-shaped brain that feeds you these fine puff-balls; and to the best of your ability, always keep me good company.
>
> And now, my dears, hop to it, and gaily read the rest, wholly at your bodies' ease and to the profit of your loins. But listen, ass-wallopers—may a chancre lame you!—remember to drink a health to me, and I will pledge you on the spot.

In this same genial spirit, Gargantua comes into the world bawling lustily "A drink! a drink! a drink!" And, the story goes, "to appease the newborn, they gave him a good stiff drink, and he was carried to the font and there baptized, as is the custom with good Christians."

The volume revealed, more than any of his other books, Rabelais' sympathy with the Protestant Reformation. Rabelais the educator is also clearly depicted, and the discussion of Gargantua's education affords him an opportunity to satirize the old methods and to set forth his own ideas which were always "rooted in the concrete realities of daily living."

A Third Book appeared in 1546. Although it treats "Of the Heroic deeds and sayings of the worthy Pantagruel," it is not concerned with tales of adventure, as were the other books, but shows that Rabelais could not resist entering the literary conflict of the day referred to as the "Querelle des femmes." Indeed, one would not expect that the greatest humanist of them all, who was always desirous of linking his work with the social, political, religious, and scientific trends of his time, would remain aloof. The question of women's rights had begun to demand attention in the preceding century and it is probable that Rabelais was influenced by one of the earliest studies on the subject entitled *The fifteen joys of marriage,* and by others in his own century, such as *The pain and anguish that comes from love, in three parts,* etc., *Perfect woman friend,* and many others by both the leading feminists and the antifeminists of the time. Rabelais was known to be an enemy of the fair sex, so it doubtless surprised many of the antifeminists to have him dedicate his book to the Queen of Navarre, the most ardent feminist of her age. They were probably more surprised to discover that beneath his rollicking satire and broad horse-play he was setting forth a modern and civilized conception of marriage based on companionship, mutual trust, and respect—a conception far in advance of his century.

In Book Four, Rabelais returned to the adventures of Pantagruel and in it are reflected the geographical discoveries and explorations of the expanding world which had been set off by the discovery of America and the search for the northwest passage.

I have heard that there are several irreverent members of this Club who somehow deliberately misunderstood my title. The circle had reference to the distinguished group of medical humanists and scholar printers with whom Rabelais found himself surrounded in Lyon. As with Alex-

ander Hamilton, there were probably other circles in his life, but contrary to the general opinion, Rabelais, as I have indicated above, was something of a misogynist and a close study of his writings will reveal that he was concerned with broader issues. And he was not only one of the greatest humanists of the Renaissance, but the most human of human beings— ". . . and thereby hangs a tale."

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Internships Class of June 1950

Unless otherwise noted all *internships* start *July 1, 1950* for one year

Name	*Service*	*Hospital*
Achenbach, H.	Surgical	Boston City
Aisenberg, A. C.	Medical	*Presbyterian, N. Y.
Allen, R. H.	Rotating	Henry Ford, Detroit
Applegarth, A. P.		Research in Calif. (Dr. Evans)
Atherton, E. R.	Rotating	Charity, New Orleans
Aycock, R. R.	Medical	Boston City
Babbitt, Rayma L.	Rotating	St. Mary's Group of Hospitals, St. Louis
Batts, E. E.	Rotating	San Francisco City and County
Bell, E. D., Jr.	Medical	Boston City
Berlow, S.	Pediatrics	Massachusetts General, Boston
Bloomingdale, L. M.	Medical	Beth Israel, Boston
Blumberg, M. S.	Pediatrics	Bellevue, N. Y.
Borg, D. C.	Medical	Boston City
Bower, R.	Rotating	*Philadelphia General
Brand, E. D.	Medical	U. of Virginia Hospital, Charlottesville
Brennan, J. T., Jr.	Surgical	Roosevelt, N. Y.
Briggs, L. R., Jr.	Rotating	San Diego County General
Brittingham, T. E.	Medical	New York
Broadaway, R. K.	Mixed	Mary Imogene Bassett, Cooperstown, N. Y.
Brown, C. C., Jr.	Mixed	Montreal General
Burnum, J. F.	Medical	New York
Burroughs, J. T.	Surgical	Johns Hopkins
Caul, E. H.	Mixed	U. of Chicago Clinics
Christie, W. E., Jr.	Rotating	St. Mary's Group of Hospitals, St. Louis
Clifton, R. H.	Surgical	Mary Imogene Bassett, Cooperstown, N. Y.
Coe, R. C.	Rotating	Massachusetts General, Boston
Colman, E. L.	Rotating	*Presbyterian, Chicago

Name	*Service*	*Hospital*
Coulter, N. A., Jr.		Biophysics Dept., Johns Hopkins U.
Creedon, R. J.	Surgical	*Roosevelt, N. Y.
Cronkhite, L. W., Jr.	Medical	Massachusetts General, Boston
Cummins, J. F.	Medical	Boston City
Dalton, J. C.	Medical	Boston City
Dampeer, J. O., Jr.	Surgical	Vanderbilt U. Hospital, Nashville
Davies, F. M.	Surgical	New York
Davis, Evelyn	Rotating	Faulkner, Boston
DiDomenico, V. P.	Rotating	*Worcester City
Ducey, J. E.	Medical	*Roosevelt, N. Y.
Eaton, J. H.	Surgical	Stanford U. Hospital, San Francisco
Egdahl, R. H.	Surgical	U. of Minnesota Hospital, Minneapolis
Eisner, V. P.	Rotating	Presbyterian, Pittsburgh
Elder, L. T., Jr.	Army-Rotating	Fitzsimons General, Denver
Estes, H. D.	Rotating	Los Angeles County General
Feldmann, R. J.	Rotating	Tripler General, Honolulu
Field, R. A.	Medical	Massachusetts General, Boston
Ford, A. B.	Medical	Massachusetts General, Boston
Frank, H. D.	Medical	Massachusetts Memorial, Boston
Gair, D. S.	Medical	Peter Bent Brigham, Boston
Gale, A. S.	Rotating	Syracuse U. Medical Center
Garran, F. W., Jr.	Surgical	Massachusetts General, Boston
Garry, J.	Rotating	Mary Hitchcock Memorial, Hanover, N. H.
Gelman, Renee L.	Rotating	Michael Reese, Chicago
Glimcher, M. J.	Surgical	Strong Memorial, Rochester
Goldblatt, J. E.	Rotating	*Philadelphia General
Graham, K. M.	Medical	Boston City
Hagerman, D. D.	Mixed	Research and Educational Hospital, Chicago
Hannas, R. R., Jr.	Rotating	U. of Kansas Medical Center, Kansas City
Hayes, T. B.	Rotating	St. Elizabeth's, Boston
Head, J. M.	Surgical	Massachusetts General, Boston
Hoeg, D. C.	Medical	Peter Bent Brigham, Boston
Hoffman, J. W.	Rotating	Lowell General, Lowell, Mass.
Hollander, W., Jr.	Medical	
	(10/1/50–9/30/52)	*Presbyterian, N. Y.
Ireton, R. J.	Rotating	*Presbyterian, Chicago
Isselbacher, K. J.	Medical	Massachusetts General, Boston
Kramer, J. C.	Medical	
	(10/15/50–11/1/52)	*U. Hospitals, Cleveland
Kriete, B. C.	Medical	Boston City
Lance, R. V.	Rotating	King County Hospital System, Seattle
Lane, F. W., Jr.	Surgical	Boston City
Laster, L.	Medical	Massachusetts General, Boston
Lear, A. A.	Medical	Boston City
Lee, F. B.	Surgical	Boston City
Levin, S. M.	Surgical	
	(7/1/50–1/1/52)	*Presbyterian, N. Y.
Liva, E. L.	Rotating	Medical College of Virginia, Richmond
Logan, W. B., Jr.	Surgical	Peter Bent Brigham, Boston
Lovelace, J. R.	Rotating	Henry Ford, Detroit
Lusted, L. B.	Medical	Massachusetts Memorial, Boston
Lyon, G. A.	Surgical	Boston City
Mabe, R. E.	Medical	Vanderbilt U. Hospital, Nashville
Macomber, P. B.	Rotating	Fitzsimons General, Denver
Mahoney, E. A., Jr.	Surgical	Grace-New Haven Community
Mandelstam, P.	Medical	Beth Israel, Boston
Margulis, A.	Rotating	Henry Ford, Detroit
McNeely, W. F.	Medical	Boston City
Merryfield, L. W.	Rotating	King County Hospital System, Seattle
Miller, W. P.	Rotating	King County Hospital System, Seattle
Minot, H. D., Jr.	Surgical	Peter Bent Brigham, Boston

Name	*Service*	*Hospital*
Mitchell, A. M.	Medical	Peter Bent Brigham, Boston
Moldawer, M.	Medical (10/1/50–9/30/52)	*Presbyterian, N. Y.
Moore, L. T.	Surgical	Boston City
Mora-Castaneda, F.	Medical	Massachusetts General, Boston
Morel, A. S.	Surgical	Bellevue, N. Y.
Morrison, R. S.	Medical	Peter Bent Brigham, Boston
O'Meara, M. P.	Medical	Peter Bent Brigham, Boston
Owens, G.	Surgical	Vanderbilt U. Hospital, Nashville
Parks, J. H.	Rotating	*Hartford Hospital
Patterson, W. B.	Surgical	*Peter Bent Brigham, Boston
Pernokas, L. N.	Surgical	Boston City
Petty, C. S.	Rotating	Mary Imogene Bassett, Cooperstown, N. Y.
Piatt, E. D., Jr.	Rotating	Charity, New Orleans
Pikula, J. V.	Surgical	Peter Bent Brigham, Boston
Powell, M. J.	Rotating	U. of Alberta Hospital, Edmonton
Proudfoot, W. H.	Mixed	Boston Marine
Ramirez de Arellano, A. A.	Medical	U. of Minnesota Hospital, Minneapolis
Reznick, L.	Medical	Peter Bent Brigham, Boston
Richards, W. A.	Pathology	Boston City
Robuck, J. D.	Rotating	Denver General
Rock, H. G.	Rotating	Fitzsimons General, Denver
Rockwood, W.	Medical	Massachusetts Memorial, Boston
Ross, M. H.	Medical	Long Island College Hospital, Brooklyn
Sachs, M. L.	Medical (2/15/51–2/15/53)	*U. Hospitals, Cleveland
Salibi, B. S.	Pathology	Children's, Boston
Saunders, N. W.	Rotating	*Rhode Island Hospital, Providence
Schaupp, W. C.	Rotating	San Francisco City and County
Schoenheit, E. W., Jr.	Rotating	Pennsylvania Hospital, Philadelphia
Schwartz, H. A.	Rotating	Mt. Sinai, N. Y.
Sears, K. L.	Medical	*Roosevelt, N. Y.
Shea, C. E., Jr.	Surgical	St. Vincent's, N. Y.
Sheldon, D. B.	Surgical	Massachusetts General, Boston
Shields, D. R.	Surgical	Massachusetts Memorial, Boston
Sissman, N. J.	Rotating	Montefiore, Pittsburgh
Slingerland, D. W.	Medical	Strong Memorial, Rochester
Smythe, R. L.	Surgical	Peter Bent Brigham, Boston
Stewart, C. T.	Pediatrics	U. of Minnesota Hospital, Minneapolis
Sykes, J. L.	Rotating	Edward Meyer Memorial, Buffalo
Walker, K. F.	Surgical	Strong Memorial, Rochester
Walker, T. E.	Pediatrics	Duke U. Hospital, Durham, N. C.
White, R. F.	Pediatrics	Grace-New Haven Community
Whitfield, T. J.	Rotating	*Philadelphia General
Wilder, W. L.	Rotating	Cleveland City
Williams, T. F.	Medical	Johns Hopkins, Baltimore
Wise, G. F.	Rotating	U. S. P. H. S., Detroit
Wolff, R.	Medical	Beth Israel, Boston
Young, D. T.	Rotating	*Jefferson, Philadelphia

*Two-year appointment

The Stethescope

The first half of the academic year is gone. Occasionally the students need a gentle reminder that, as Mr. J. Q. Adams of the Class of 1787 put it, their instructors deplore any overt tendency for them to laugh and drink and sing and make with noise the College ring. On the whole, however, their conduct has been good. One of their most recent projects is the publication of "H.M.S. 'Murmur' ". At present this is a mimeographed periodical which appears at weekly intervals. It mentions coming events which may be of interest to the local medical community and in addition, gives a running account of student life around the School, an account, for example, of such affairs as the recent invasion of Vanderbilt Hall by the "Smithereens", a group of warblers from Smith College who sang most prettily.—To subscribe to the "Murmur" one has only to send to HMS Murmur, Vanderbilt Hall, 107 Avenue Louis Pasteur, Boston 15. —There is something comforting about the Harvard Medical School in the way it keeps alive old customs. Under the heading "Entertainment at Faculty Meetings," the minutes for September 26th, 1871, state: "On motion by Dr. Holmes it was voted that provision be made, hereafter, at the expense of the Faculty, for such entertainment as may be decided upon". The happy tradition of having a collation served at Faculty meetings fell into desuetude so long ago that hardly a man is now alive who remembers that it ever existed. Nevertheless, it has been resurrected and tea, as an entertainment, is served for half an hour before each meeting. The result is that hypoglycemic reactions and hunger-pains have vanished and Faculty debate is correspondingly less restrained and more interesting.—The last two meetings were largely given over to a discussion of academic matters. Dr. Krayer gave a delightful account of how modern pharmacology is taught. For those who remember Dr. Franz Pfaff, or his colleague Dr. Vejux Tyrode, and their valiant efforts to make understandable the action of drugs, Dr. Krayer was most enlightening. The modern pharmacologist wishes to discover not only the mode of drug action on living tissue but also the precise site and mechanism of whatever action occurs. While the teaching of such fundamental knowledge is complicated and may demand the use of physical, chemical and physiological methods yet it is exciting for medical students in their laboratory work. It lays a firm foundation, too, for their clinical studies on the use of selected groups of drugs to which they are exposed later in the second year and for therapeutic seminars which are held at the various hospitals during the fourth year.—Dr. McDaniel spoke about student health. He described his new quarters in Vanderbilt Hall. He emphasized the care with which the health of the students is watched, outlining the methods employed in looking after them when they fall ill and contrasting the different types of sickness encountered in the Medical School as compared with what occurs most commonly in the College, or in the Law or Business Schools. In general, psychosomatic phenomena are seen most frequently and usually can be benefitted by wholesome commonsense advice.—For a week recently the flag on the Administration Building hung at melancholy half mast; Dr. George Minot died on February 25th and Dr. Percy Howe on February 28th. Both of these men were loyal and distinguished servants of the University, the one, in the words of Mr. Lowell, "a medical explorer, who abolished a fatal malady, and opened a road for more recovery", and the other, as characterized by Mr. Conant, "prophet of a new era in dental medicine, a practitioner who demonstrated the need for fundamental studies of the problems of his profession". Students for many future generations in the Medical School and the School of Dental Medicine will remember their names with respect and will be grateful for their influence.

Annual Meeting and Dinner

I would like to call the attention of all the Harvard Medical Alumni Association to the Annual Meeting and Dinner to be held in conjunction with the American Medical Association meeting this *June* in *San Francisco*. The dinner will be held on Wednesday, June 28, at the Palace Hotel. Tickets will be on sale at the convention headquarters.

This year your Committee felt that the meeting should be a social evening, starting with refreshments before the dinner, an excellent dinner, and one speaker whose talk would be short. We believe the importance of this meeting is to renew acquaintances and friendships with your classmates and to give you an opportunity to bring each other up to date.

The speaker for the evening will be Dr. George Packer Berry, new Dean of the Harvard Medical School.

I urge all of you who are at the American Medical Association meeting in San Francisco to make definite plans now to attend the Harvard Medical Alumni Dinner on the evening of June 28. The Committee assures you of a relaxing, informative and entertaining evening.

CHARLES A. NOBLE, JR., 1929, *Chairman*

Reunions

(Details of the programs and reply postal cards will be sent to all classes within the next month.)

1900

A Fiftieth Reunion will be held at the Harvard Club of Boston, Tuesday, May 16.

1905

A Forty-fifth Reunion will be held at the Harvard Club of Boston, Thursday, June 15.

1910

A Fortieth Reunion will be held Thursday, May 18. Luncheon at Vanderbilt Hall and dinner at the Harvard Club of Boston.

1915

A Thirty-fifth Reunion will be held at the Harvard Club of Boston, Friday, April 21.

1920

A Thirtieth Reunion will be held at the Harvard Club of Boston, Wednesday, May 10.

1925

A Twenty-fifth Reunion will be held Friday and Saturday, June 2 and 3.

1930

A Twentieth Reunion will be held at the Harvard Club of Boston, Saturday, June 3.

1935

A Fifteenth Reunion will be held at the Harvard Club of Boston, Thursday, May 18.

1940

A Tenth Reunion will be held at the Harvard Club of Boston, Saturday, June 3.

1945

A Fifth Reunion will be held at the Harvard Club of Boston, Saturday, May 27.

THE ATMOSPHERE OF A UNIVERSITY

A university in a free society is the most stable of man's institutions. Vast business enterprises fail, governments fall (almost daily in some places) and even religions are dissenting, reviving or withering away. But a well-ordered university will survive for centuries, a rock-like guardian of the spirit of man amidst the ebb and flow of human affairs.

The benignant influence which a university may exert upon the State is well shown in Professor Cohn's account of what he calls the "symbiotic relationship" which has existed between the Biologic Laboratories of the State of Massachusetts and Harvard University. Here we see a university lifting up a State institution, freeing it from the shifting and paltry controls of politics and endowing it with the spirit of investigation and learning so that the best minds are attracted by its opportunities. In turn, the utilitarian interests of the State and Nation provide an outlet and a directional guide for research in the basic sciences within the university.

It must not be supposed that a utilitarian bent for research is essential or even desirable in most instances but it is obvious that a university must take an active interest in the practical problems which beset mankind if it is to maintain a powerful influence for good in the world. The relationship between Harvard University and the Biologic Laboratories of the State of Massachusetts is a splendid example of how a university without sacrificing the ideals of pure research may contribute immeasurably to the solution of practical problems outside its own walls.

It is particularly fitting that Professor Cohn should call our attention to this happy symbiosis because in his own work he has always been an ardent champion of the belief that a university has no walls. He has emphasized the interdependence of the medical and natural sciences and he has demonstrated the advantages of interdepartmental investigation. As Chairman of the Division of the Medical Sciences of the Faculty of Arts and Sciences he has urged the introduction of new courses and new programs especially designed to bring the medical scientist into close contact with the thinking in laboratories other than those in which he may be working. His policy of making the separated protein components of blood available for free research in many laboratories within and beyond Harvard University has paved many paths leading to an eventual understanding of the complex nature of body fluids.

These efforts call to mind the definition of a university as "an assemblage of learned men, zealous for their own sciences, and rivals of each other, brought by familiar intercourse and for the sake of intellectual peace to adjust together the claims and relations of their respective subjects of investigation. They learn to respect, to consult, to aid each other. Thus is created a pure and clear atmosphere of thought." In such a catalytic atmosphere, pure research, utilitarian research and many profitable symbioses in all fields of endeavor thrive and prosper; and all who breathe such an atmosphere receive the spirit of truth and progress which is a university education.